

CELIA ANTENEODO

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Título: A minimalist thermal diode

Resumo:

For a system consisting of two interacting classical particles, each one subject to an on-site potential and to a Langevin thermal bath, we explore the conditions under which the diode effect emerges when inverting the temperature difference. Calculating analytically the heat current that can be established through the system under a temperature gradient. This two-particle diode, even simple, allows to foresee the distinct role that diverse types of nonlinearity and asymmetry play in thermal rectification of larger systems.